Abstract

A system and method are described herein for determining the quality of an optical material by measuring and analyzing birefringence (e.g., stress-induced birefringence, inherent birefringence) in the optical material (e.g., glass sheet). The method is a scanning technique in which a birefringence sensor is set to a first optical state and then moved in a direction at a constant velocity over a glass sheet while first power transmission measurements are made at a high data rate. At the end of this move, the birefringence sensor is set to a second optical state and then moved at the same velocity back over the glass sheet, while second power transmission measurements are made. This procedure is repeated the same number of times as there are optical states in the birefringence sensor. A computer then calculates birefringence values using profiles of the power transmission measurements so as to determine the quality of the glass sheet.